

IN THE SPECIFICATION:

On page 1, after the title, insert the following heading:

BACKGROUND OF THE INVENTION

On page 2, after line 18, please insert the following heading:

SUMMARY OF THE INVENTION

On page 3, lines 3-11, please amend the paragraph to read as follows:

This object is achieved by the measuring apparatus according to claim 1, on the one hand. In said apparatus, wherein, in a first arrangement, the resonator is located in a cutout of the light guide, preferentially within a hollow waveguide and by the apparatus described in claim 11, on the other hand. In said apparatus, wherein, in a second arrangement, the resonator is placed in a wedge-shaped sensing tip formed by two converging bars. Dependent claims refer to different advantageous embodiments of the invention.

On page 3, lines 12-22, to page 4, lines 1-5, please amend the paragraph to read as follows:

In the solution apparatus according to claim 1 the first arrangement, a cutout is formed in the light guide and the resonator is - at least partially - placed within this cutout. The resonator is mechanically fixed in this cutout and optically coupled to the light guide. The resonator is directly attached to the light guiding material and is fixed in this position by the jamming and/or the adhesive forces that act between the resonator and the light guide.

Preferably, the resonator is more than half, and most preferably, the resonator is even totally housed in the cutout described above. Usually, light guides consist of a light guiding core and a cladding attached to it.

Preferably, the cutout is formed in the core region. As described below in more detail, the light guide can also be realized as hollow waveguide. In this case, the central hollow part forms the cutout in which the resonator is placed.

On page 4, lines 6-12, please amend the paragraph to read as follows:

This solution embodiment has the advantage that by the mechanical mounting of the resonator directly on the light guide no adhesive is necessary. In addition, it is no longer necessary to shape the light guides into thin tapered tips and to position said tips exactly on the resonator. In contrast, the resonator is directly fixed and positioned in the cutout of the light guide.

On page 7, lines 7-13, please amend the paragraph to read as follows:

~~For the solution according to claim 11 In the second arrangement according to the invention, a wedge-shaped~~ sensing tip is used. The resonator is located on the front part of the sensing tip. On the rear part of the sensing tip, two light guides are mounted. The sensing tip has two facing converging bars. These bars consist at least in part of light guiding material. The resonator is arranged between the two bars.

On page 8, lines 17-22, to page 9, lines 1-9, please amend the paragraph to read as follows:

For the measuring apparatus according to ~~claim 1 as well as~~  
~~to claim 11 both the first and second arrangements,~~ a number  
of advanced embodiments are possible. Thus, the apparatus  
can comprise several resonators. They can be attached to the  
same light guide or guides. For example, in the case of a  
hollow waveguide several resonators can be placed at  
different locations within the hollow waveguide by this way.  
Similarly, several resonators with different sizes can be  
placed in a row between the bars of the wedge shaped sensing  
tip. On the one hand, several resonators can serve for a  
simultaneous measurement on different locations. On the  
other hand, different resonators can also be used for  
measurements in different measuring ranges. In this way a  
higher accuracy in a particular measuring range or an  
extension of the measuring range is achieved.

On page 11, delete lines 9-11, and insert the following  
paragraph and heading:

~~Based on drawings, embodiments of the invention are described in more detail in the following. The drawings show:~~

For a full understanding of the present invention, reference should now be made to the following detailed description of the preferred embodiments of the invention as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS;

On page 15, before line 1, please insert the following heading and paragraph:

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments of the present invention will now be described with reference to Figures 1-19 of the drawings.  
Identical elements in the figures are designated with the same reference numerals.

On page 25, after the last line, insert the following paragraph:

There has thus been shown and described a novel  
measuring apparatus which fulfills all the objects and  
advantages sought therefor. Many changes, modifications,  
variations and other uses and applications of the subject  
invention will, however, become apparent to those skilled in  
the art after considering this specification and the  
accompanying drawings which disclose the preferred  
embodiments thereof. All such changes, modifications,  
variations and other uses and applications which do not  
depart from the spirit and scope of the invention are deemed  
to be covered by the invention, which is to be limited only  
by the claims which follow.